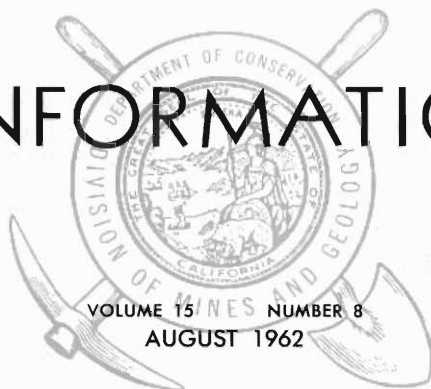


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## *The Portland Cement Industry in California--1962*

### PART II

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*This is the second part of a summary of the status of the portland cement industry in California. The previous issue (July 1962) of Mineral Information Service carried the first part of the article, which included a location map.*

#### **Calaveras Cement Division of the Flintkote Corporation—Redding Plant**

California's newest cement plant is located just west of Highway 99 at Mountain Gate, 12 miles north of Redding, Shasta County. The first shipments were made on February 9, 1962. Initial rated capacity of this wet process plant is 1,500,000 barrels per year from a single oil-fired kiln 13.5 feet in diameter at the hot end, 12.5 feet in diameter at the cooler end, and 425 feet long.

Rock to feed the plant comes from the south peak of Gray Rocks, 1½ miles to the northeast, and from pits half a mile southwest of the mill. The McCloud Limestone of lower Permian age and clay shales and altered volcanic rocks of the Kennett, Bass Mountain Diabase and Bragdon Formations supply the raw materials. The limestone is massive, fine-grained, light-dove-gray rock. The main deposit is oval in plan, gently homoclinal, and roughly 2000 feet long by 500 feet wide by 400 feet deep. Other smaller limestone deposits lie adjacent.

After blasting and secondary breaking by drop balls, limestone is loaded by 3-cubic-yard power shovels onto 25-ton Euclid trucks which transfer the rock about 1200 feet north to the primary crusher, which discharges minus-5-inch material down a 550-foot inclined shaft to a draw pocket at the end of a 740-foot adit. It is carried from the draw pocket to the mill surge pile by a belt conveyor nearly 7,000

feet long. The belt moves at 8 miles per hour and can deliver 300 tons of crushed limestone to the surge pile per hour.

From the surge pile the stone is belt-fed to secondary crushers which discharge minus 2-inch material to the tertiary crushers which in turn discharge minus ¾-inch material. This goes to storage piles along with shale which has been similarly treated. Limestone and shale, in proportions of about 75 percent to 25 percent, are transferred by traveling crane to the raw-grinding circuits and from these to blending silos, where any needed adjustments in the mix are made. After de-watering, the blend is fed to the kilns, converted to clinker, and cooled before going to clinker storage. The clinker is blended with about 4 percent of rock gypsum, transferred by travelling cranes to the finish-grind ball mills and reduced to 3200-6000 Blaine fineness (a consistency finer than face powder) and then transferred to the finished cement storage silos.

The plant is largely automatic and only 80 men are needed for the 24-hour weekday operation. Weekends the plant can be operated by only 5 to 8 men. A total of 105 men are employed in various phases of the operation. The output is marketed in California as far south as Marysville and in Oregon and Washington.

#### **Calaveras Cement Division, the Flintkote Company—San Andreas Plant**

Calaveras' other plant is located 1½ miles south of the town of San Andreas, Calaveras County. It is a wet process plant and has not been enlarged or greatly altered since the expansion ending in 1956. The capacity is about 4,400,000 barrels per annum. Two electric shovels and a diesel-powered drill have been recently added to the quarry No. 1 area. The company discontinued making white cement several years